FIG. 1

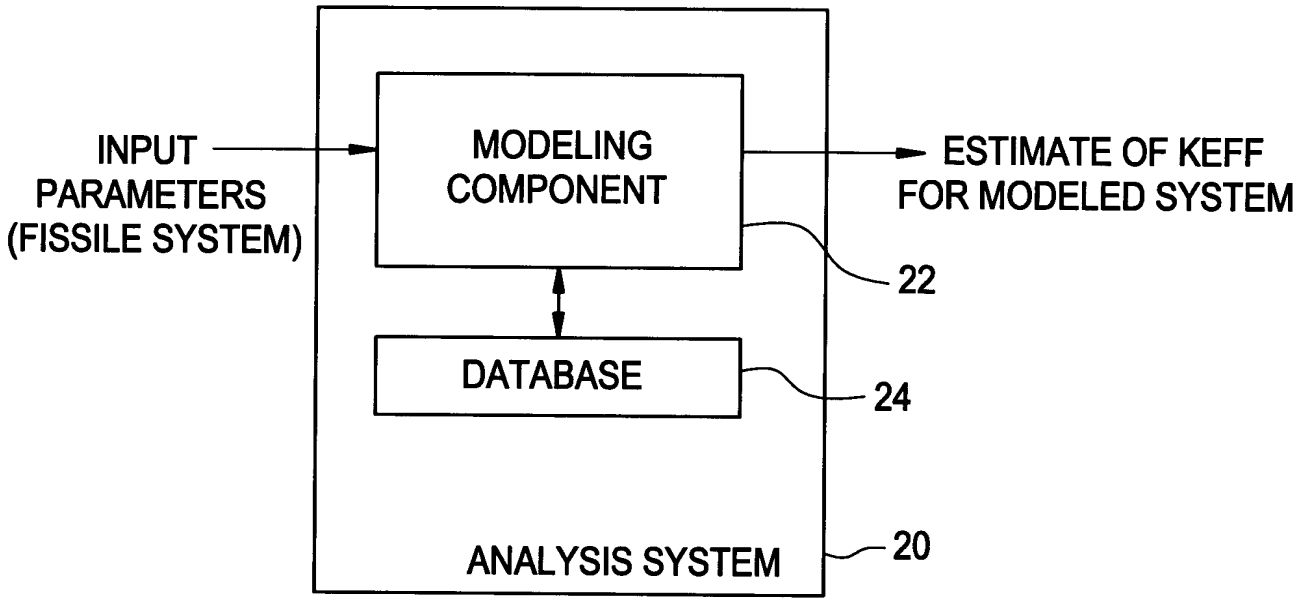

INPUT
PARAMETERS
(FISSILE SYSTEM)
MODELING
COMPONENT
ESTIMATE OF KEFF
FOR MODELED SYSTEM
22
DATABASE
24
ANALYSIS SYSTEM
20

FIG. 2A

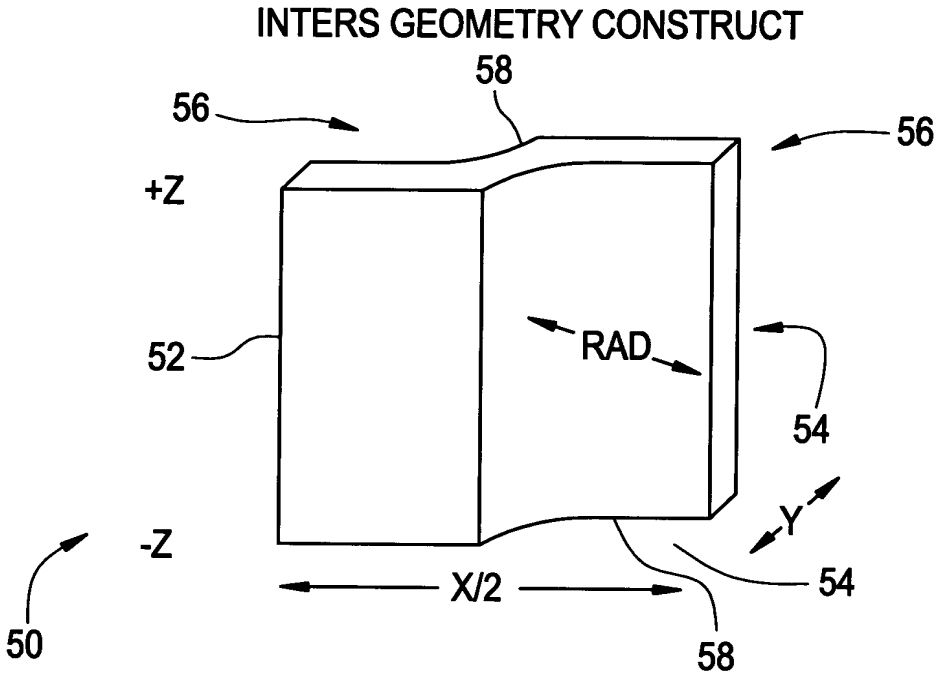

INTERS GEOMETRY CONSTRUCT
58
56
56
+Z
52
RAD
54
Y
-Z
54
X/2
50
58

FIG. 2B

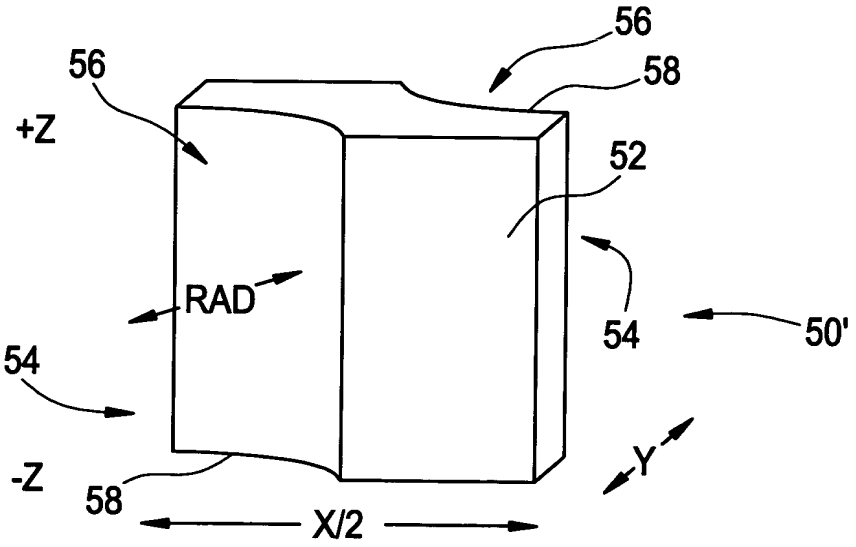

INTERS GEOMETRY CONSTRUCT
56
56
58
+Z
52
RAD
54
50'
54
Y
-Z
58
X/2

FIG. 3

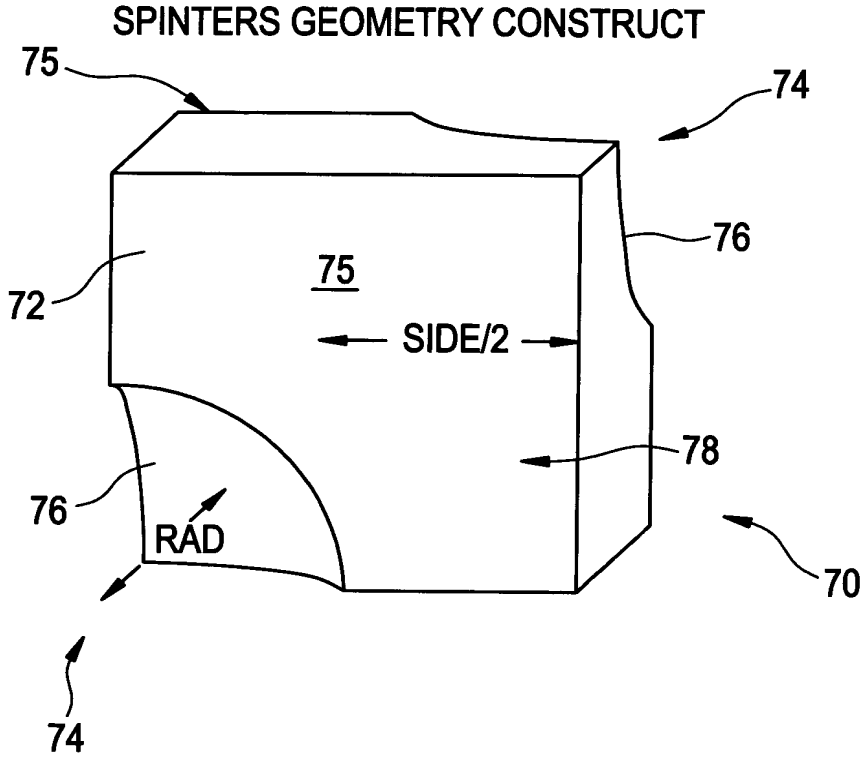

SPINTERS GEOMETRY CONSTRUCT
75
74
76
72
75
SIDE/2
78
76
RAD
70
74

FIG. 4

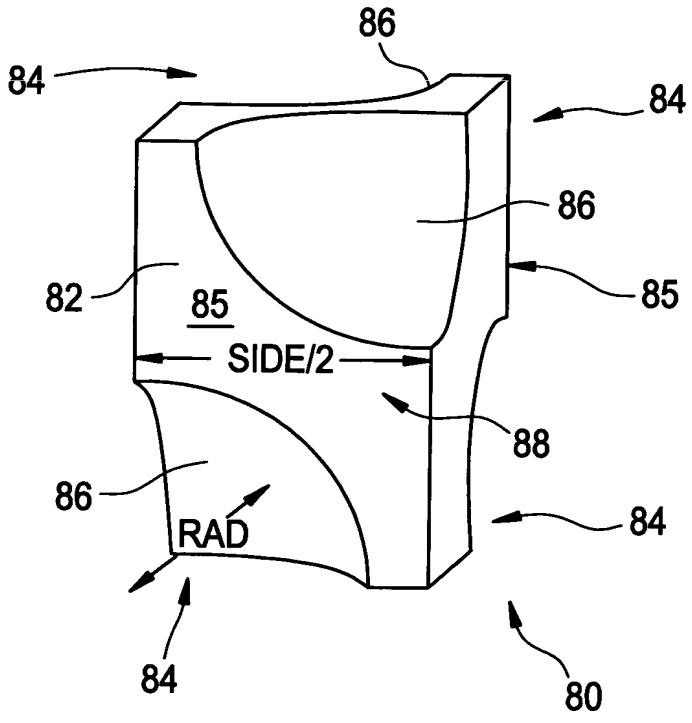

TRITERS GEOMETRY CONSTRUCT
86
84
84
86
82
85
85
SIDE/2
88
86
RAD
84
84
80

FIG. 5

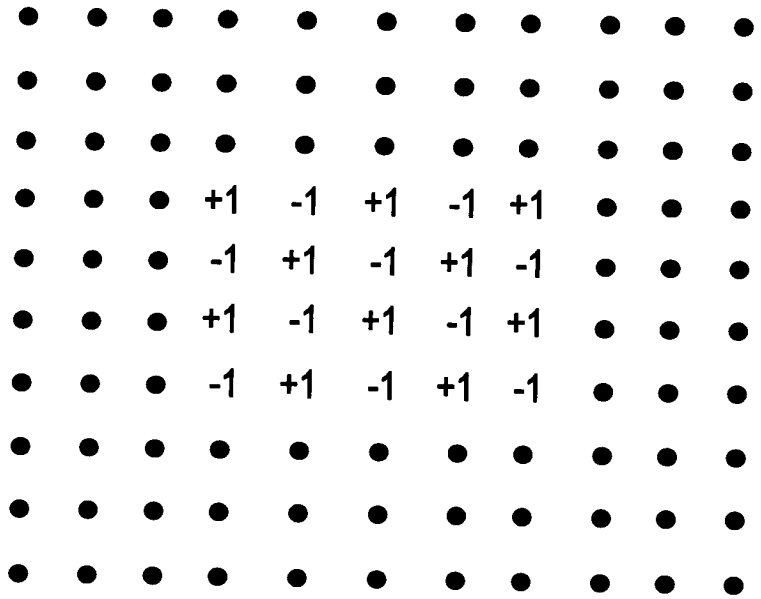


FIG. 6

COMPLEX EMBEDDED OPTION

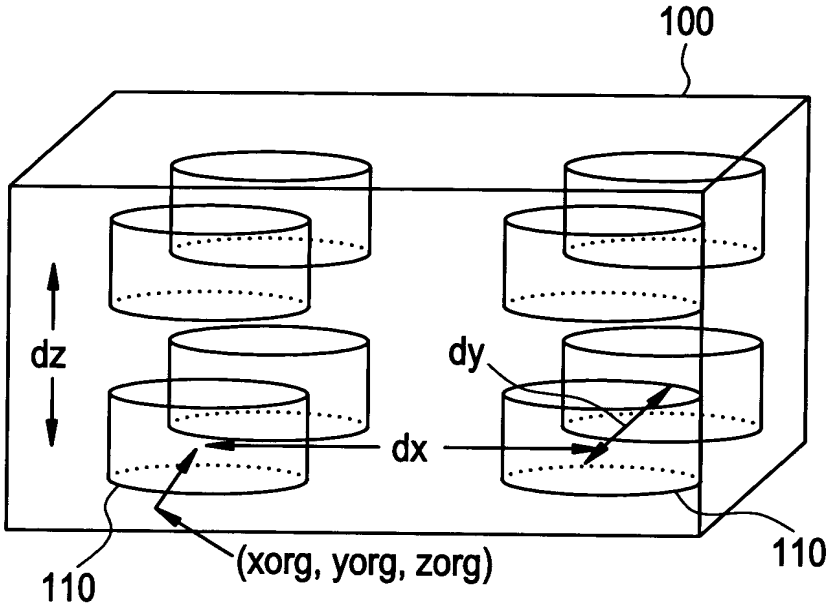


FIG. 7

VIRTUAL FILL OPTION

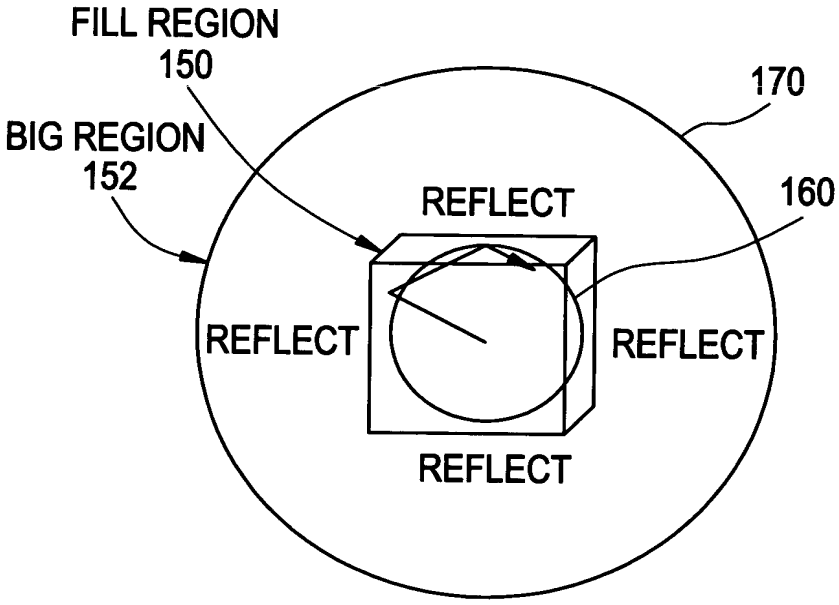


FIG. 8

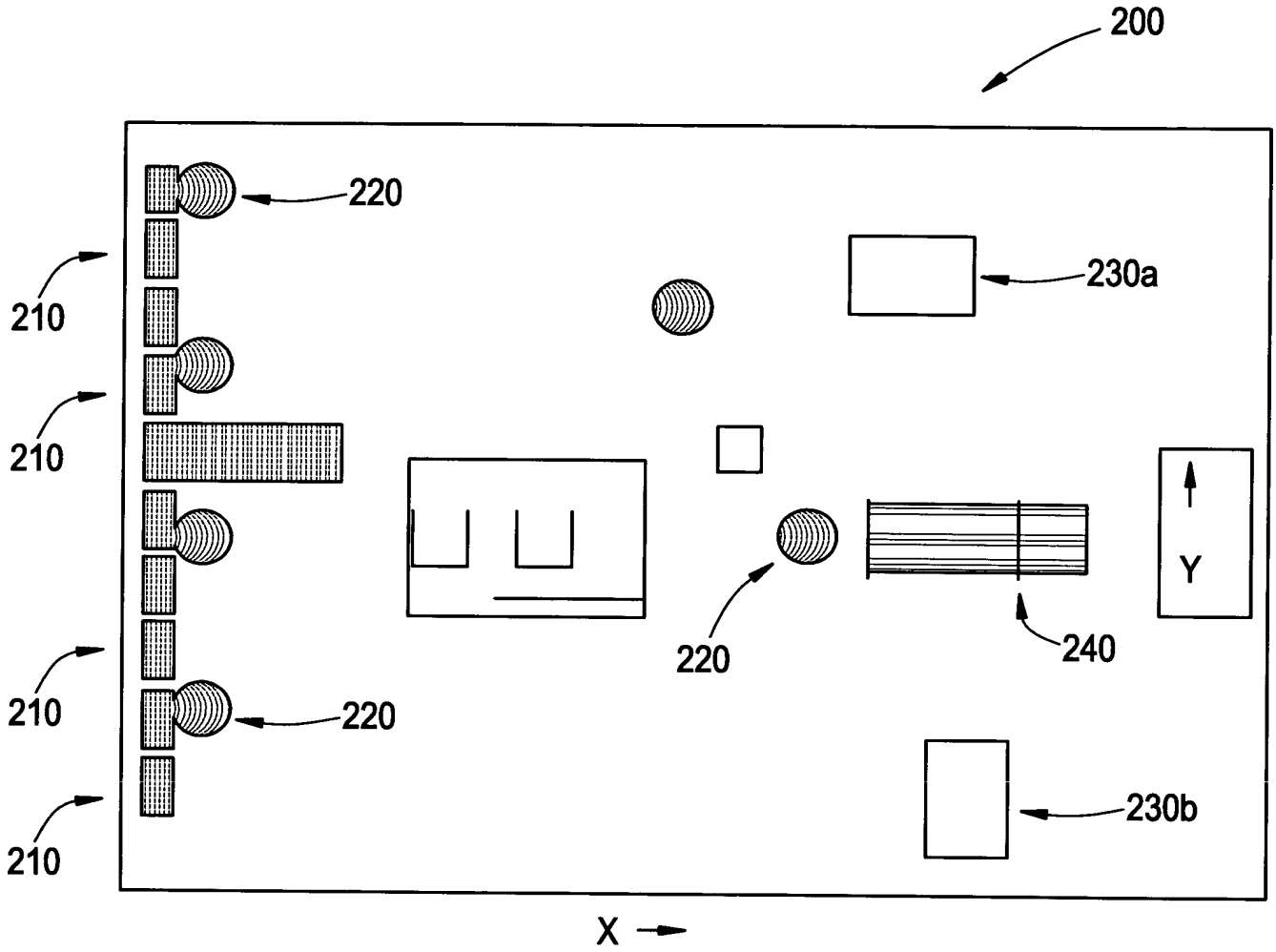


FIG. 9

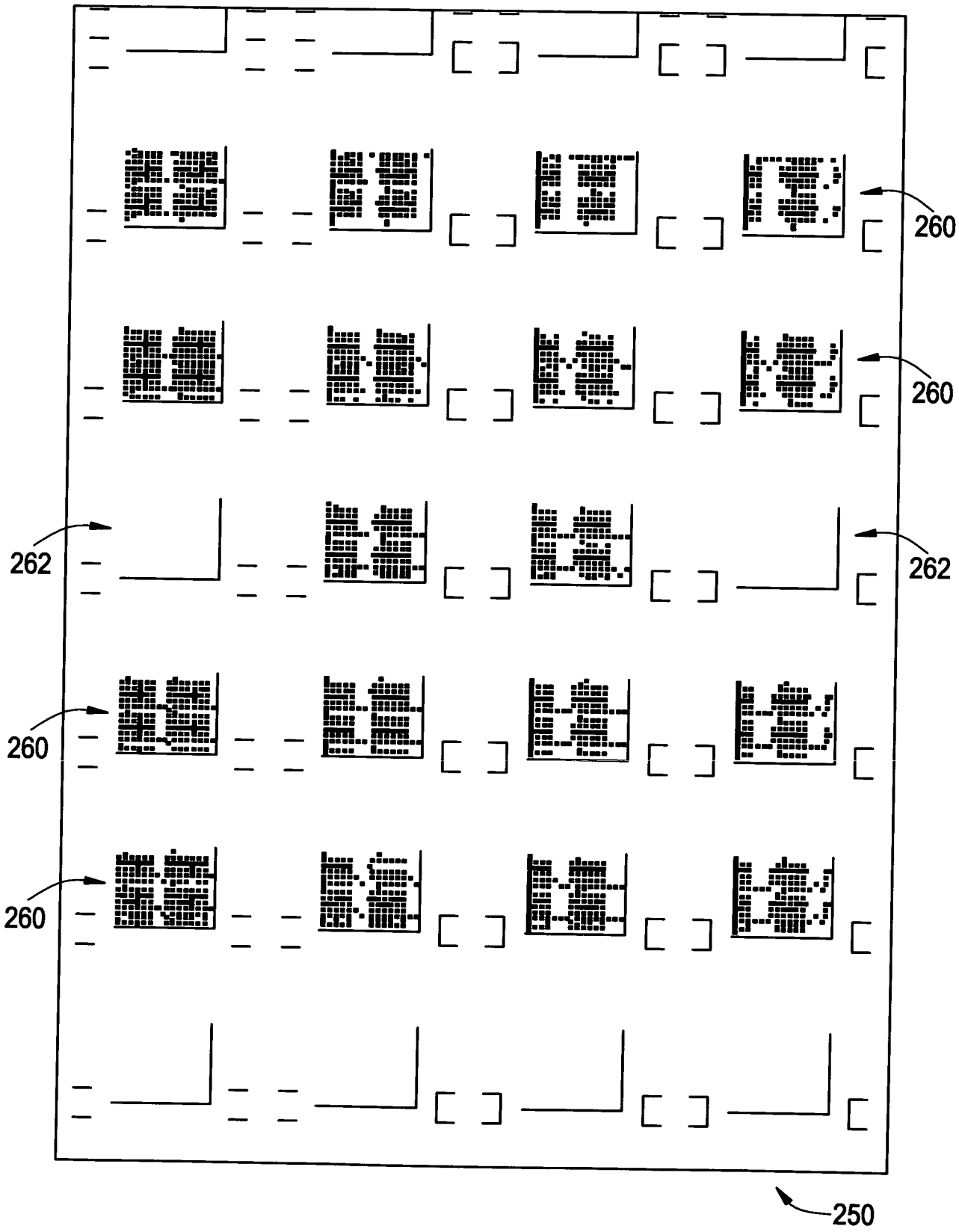


FIG. 10

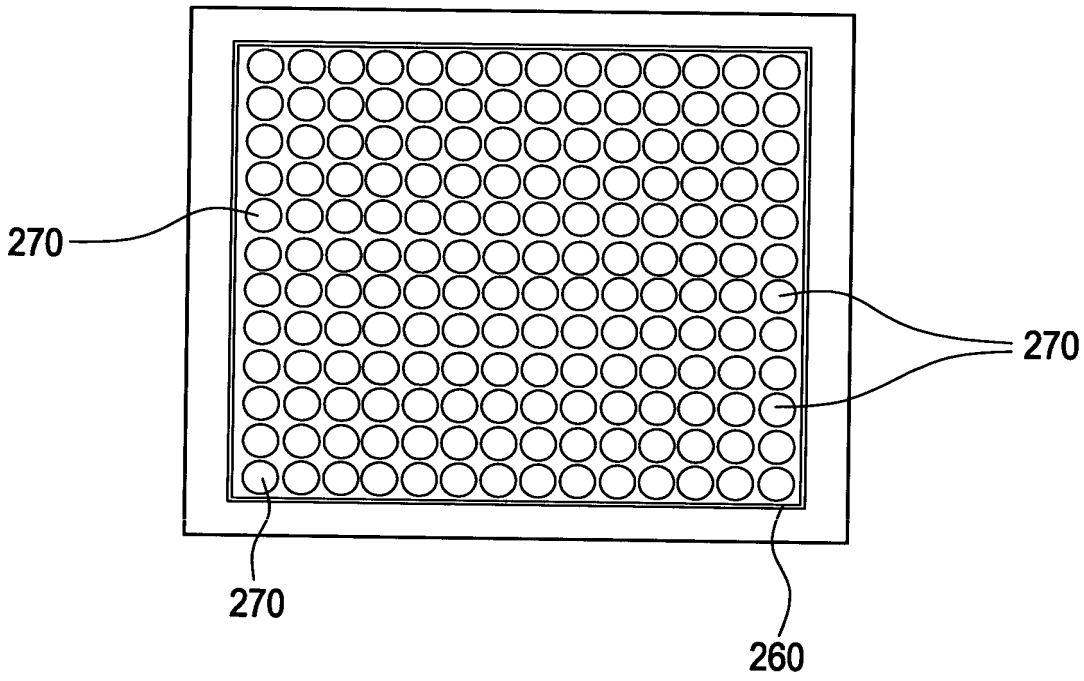


FIG. 11A

EMBEDDED SQUARE LATTICE WITH OVERLAP

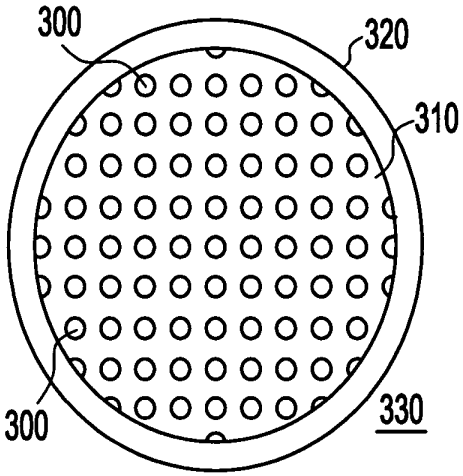


FIG. 11B

EMBEDDED SQUARE LATTICE W/O OVERLAP

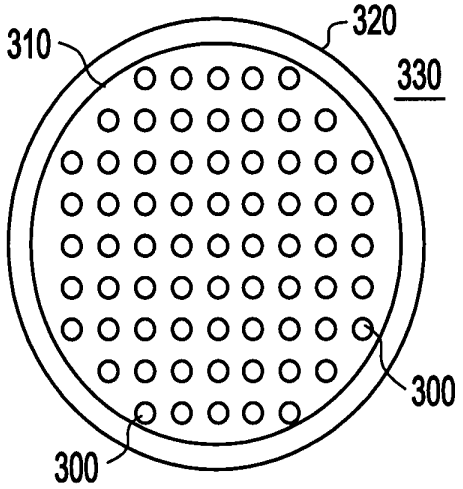


FIG. 11C

EMBEDDED SQUARE LATTICE USING VFO

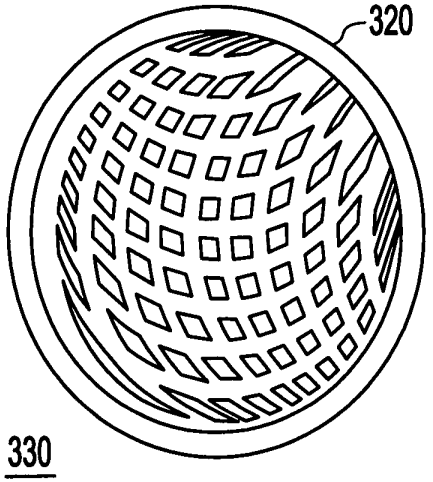


FIG. 11D

EMBEDDED TRIANGULAR LATTICE WITH OVERLAP

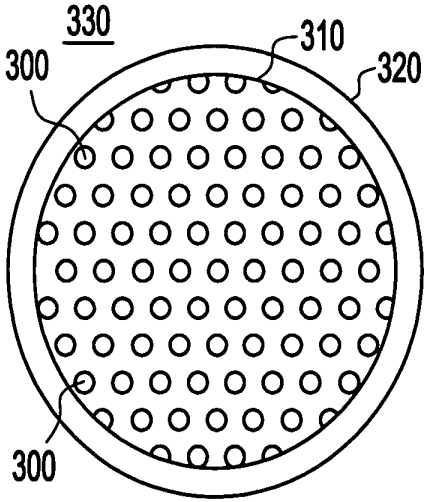


FIG. 11E

EMBEDDED TRIANGULAR LATTICE W/O OVERLAP

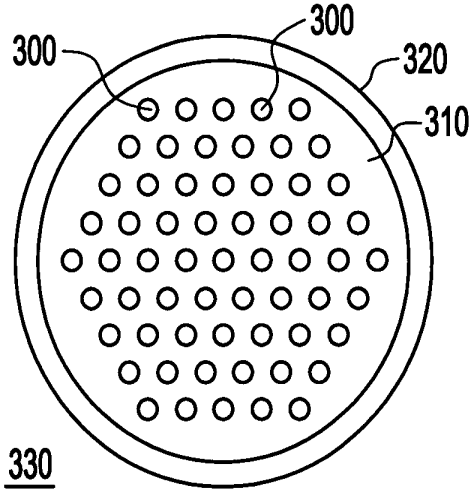


FIG. 11F

EMBEDDED TRIANGULAR LATTICE USING VFO

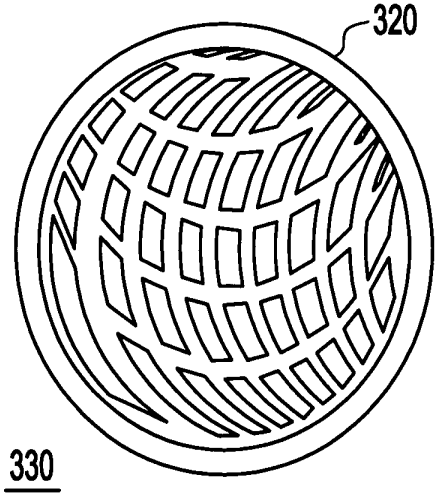


FIG. 12

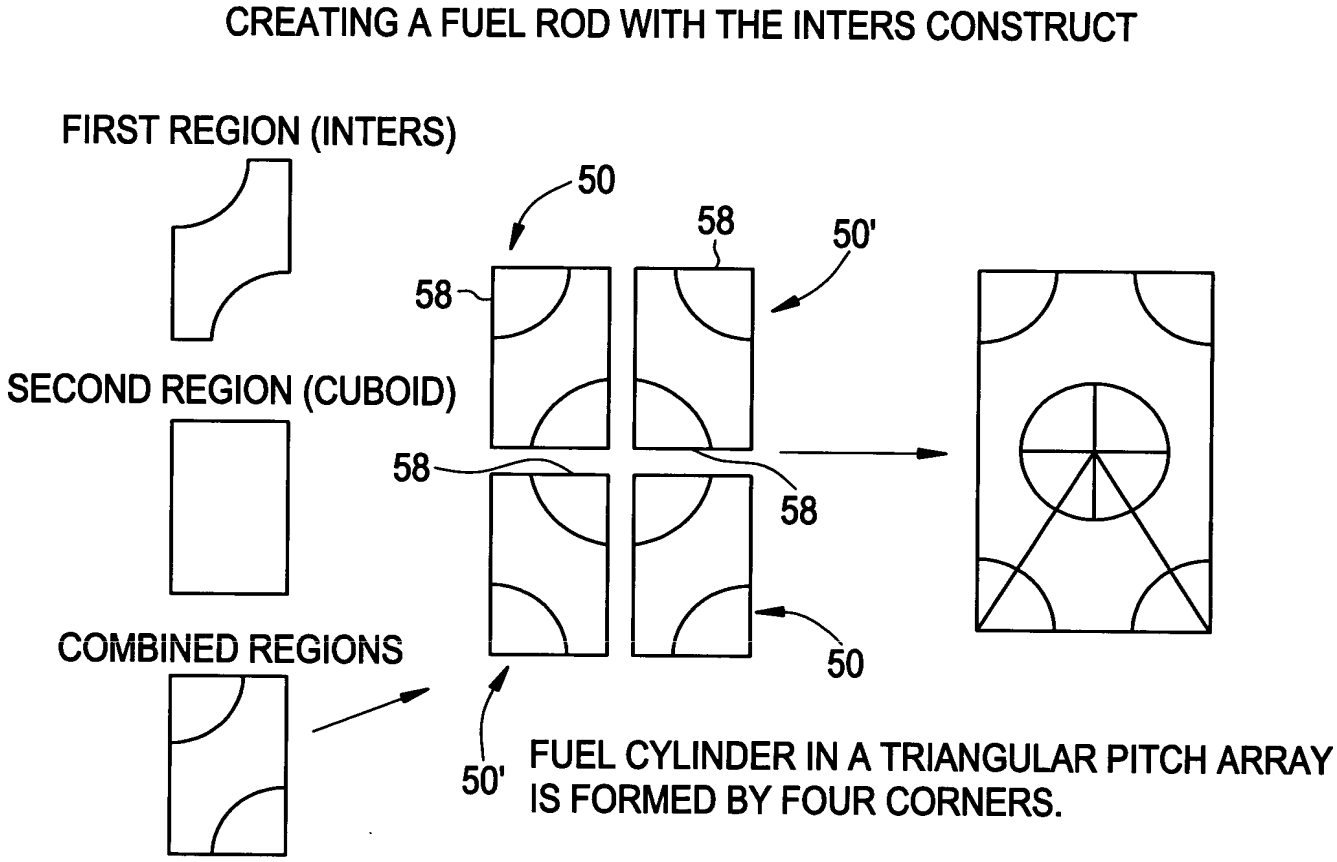

CREATING A FUEL ROD WITH THE INTERS CONSTRUCT
FIRST REGION (INTERS)
SECOND REGION (CUBOID)
COMBINED REGIONS
50
58
50'
58
58
58
50
50'
FUEL CYLINDER IN A TRIANGULAR PITCH ARRAY
IS FORMED BY FOUR CORNERS.

FIG. 13

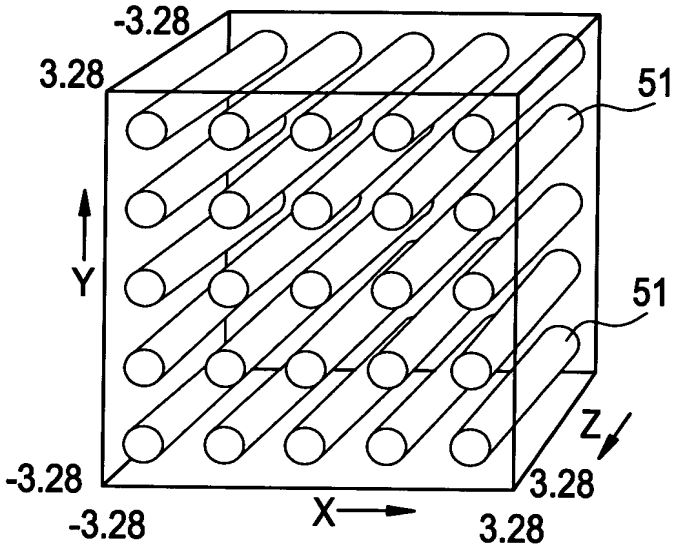

-3.28
3.28
51
Y
51
Z
-3.28
3.28
-3.28
X
3.28

FIG. 14

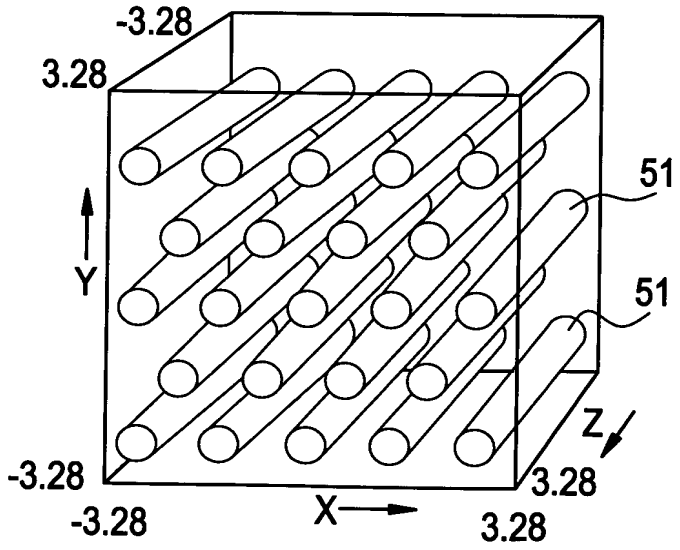

-3.28
3.28
51
Y
51
Z
-3.28
3.28
-3.28
X
3.28

FIG. 15A

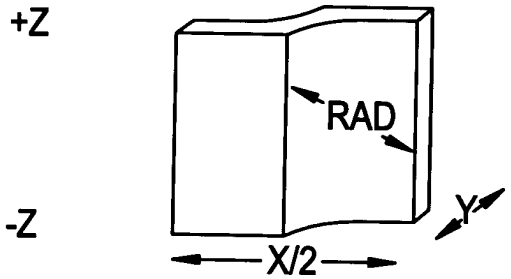


FIG. 15B

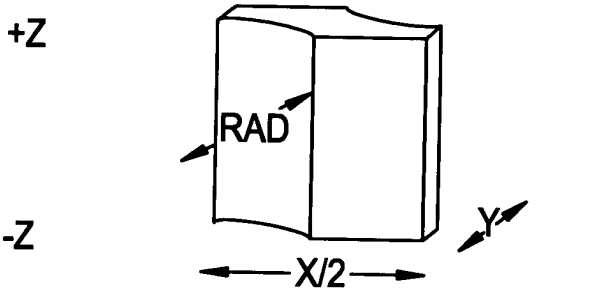


FIG. 15C

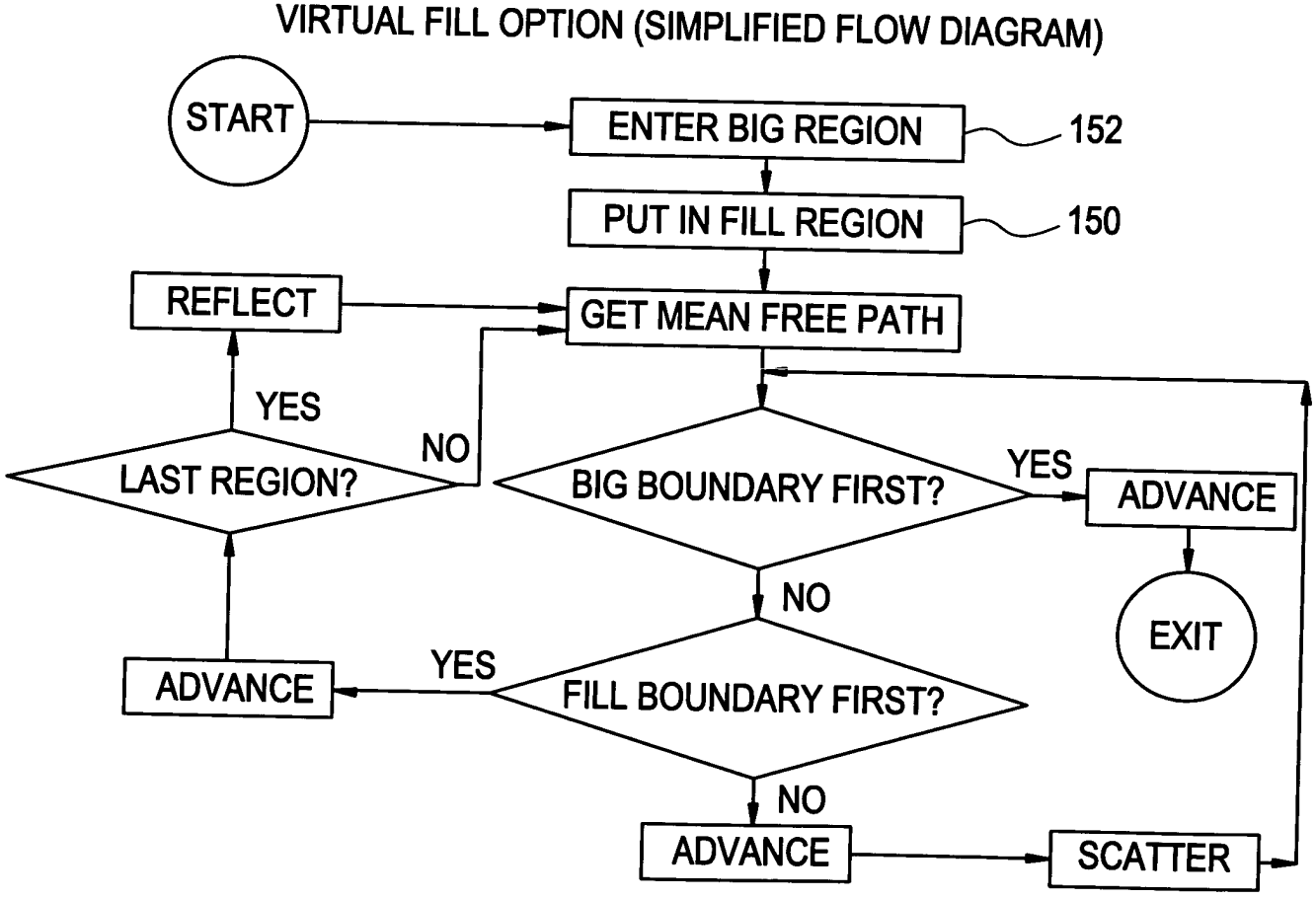


FIG. 16

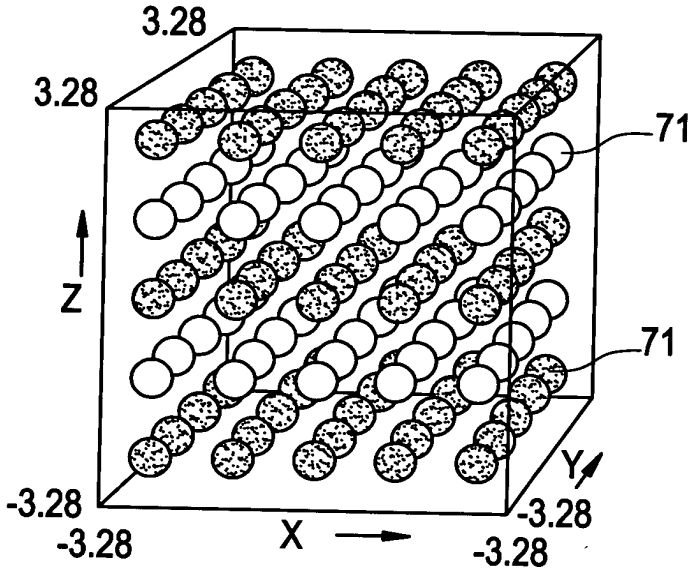
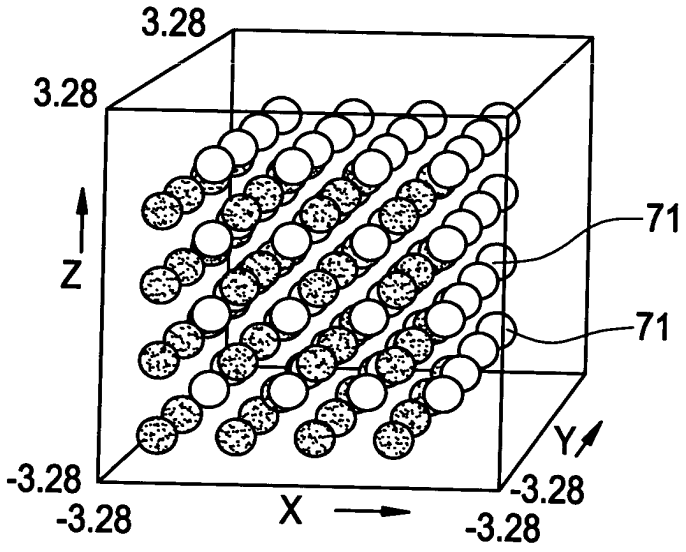

3.28
3.28
71
71
Z
Y
-3.28
-3.28
X
-3.28
-3.28

FIG. 17


3.28
3.28
71
71
Z
Y
-3.28
-3.28
X
-3.28
-3.28

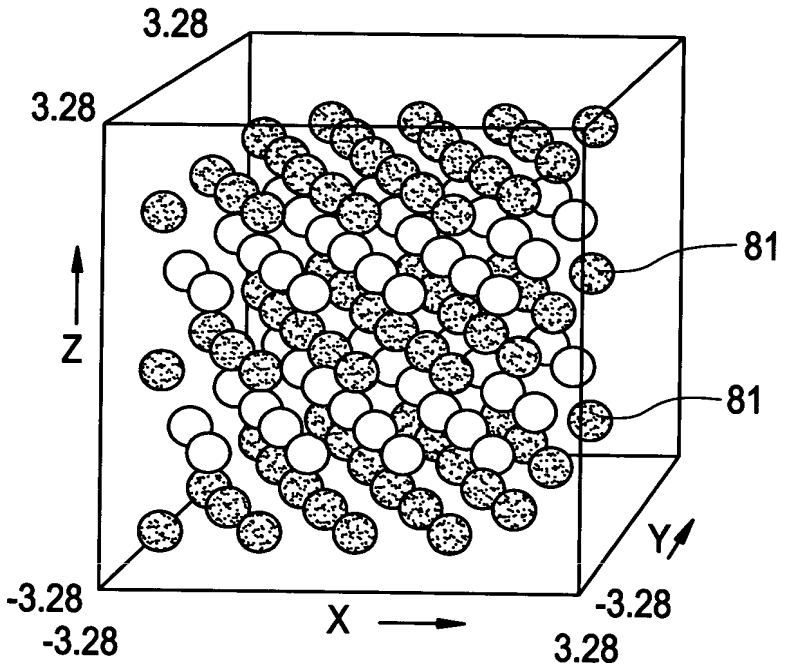



FIG. 18